



OICE

ENTERED

RAW SEQUENCE LISTING

DATE: 05/16/2002

PATENT APPLICATION: US/09/855,632A

TIME: 17:00:09

Input Set : A:\Reiterd4.app

Output Set: N:\CRF3\05162002\I855632A.raw

3 <110> APPLICANT: Reiter, Robert E.
 4 Witte, Owen N.
 5 Saffran, Douglas C.
 6 Jakobovits, Aya
 8 <120> TITLE OF INVENTION: PSCA: PROSTATE STEM CELL ANTIGEN AND USES THEREOF
 10 <130> FILE REFERENCE: 30435.69USD4
 12 <140> CURRENT APPLICATION NUMBER: 09/855,632A
 C--> 13 <141> CURRENT FILING DATE: 2002-05-07
 15 <150> PRIOR APPLICATION NUMBER: 09/564,329
 16 <151> PRIOR FILING DATE: 2000-05-03
 18 <150> PRIOR APPLICATION NUMBER: 09/359,326
 19 <151> PRIOR FILING DATE: 1999-07-20
 21 <150> PRIOR APPLICATION NUMBER: 09/318,503
 22 <151> PRIOR FILING DATE: 1999-05-25
 24 <150> PRIOR APPLICATION NUMBER: 09/251,835
 25 <151> PRIOR FILING DATE: 1999-02-17
 27 <150> PRIOR APPLICATION NUMBER: 09/203,939
 28 <151> PRIOR FILING DATE: 1998-12-02
 30 <150> PRIOR APPLICATION NUMBER: 09/038,261
 31 <151> PRIOR FILING DATE: 1998-03-10
 33 <150> PRIOR APPLICATION NUMBER: 60/124,658
 34 <151> PRIOR FILING DATE: 1999-03-16
 36 <150> PRIOR APPLICATION NUMBER: 60/120,536
 37 <151> PRIOR FILING DATE: 1999-02-17
 39 <150> PRIOR APPLICATION NUMBER: 60/113,230
 40 <151> PRIOR FILING DATE: 1998-12-21
 42 <150> PRIOR APPLICATION NUMBER: 60/074,675
 43 <151> PRIOR FILING DATE: 1998-02-13
 45 <150> PRIOR APPLICATION NUMBER: 60/071,141
 46 <151> PRIOR FILING DATE: 1998-01-12
 48 <150> PRIOR APPLICATION NUMBER: 60/228,816
 49 <151> PRIOR FILING DATE: 1997-03-10
 51 <160> NUMBER OF SEQ ID NOS: 27
 53 <170> SOFTWARE: PatentIn Ver. 2.0
 55 <210> SEQ ID NO: 1
 56 <211> LENGTH: 998
 57 <212> TYPE: DNA
 58 <213> ORGANISM: Homo sapiens
 60 <220> FEATURE:
 61 <221> NAME/KEY: misc_feature
 62 <222> LOCATION: (543)
 63 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
 65 <220> FEATURE:

RAW SEQUENCE LISTING

DATE: 05/16/2002

PATENT APPLICATION: US/09/855,632A

TIME: 17:00:09

Input Set : A:\Reiterd4.app

Output Set: N:\CRF3\05162002\I855632A.raw

```

66 <221> NAME/KEY: misc_feature
67 <222> LOCATION: (580)
68 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
70 <220> FEATURE:
71 <221> NAME/KEY: misc_feature
72 <222> LOCATION: (584)
73 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
75 <220> FEATURE:
76 <221> NAME/KEY: misc_feature
77 <222> LOCATION: (604)
78 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
80 <220> FEATURE:
81 <221> NAME/KEY: misc_feature
82 <222> LOCATION: (608)
83 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
85 <220> FEATURE:
86 <221> NAME/KEY: misc_feature
87 <222> LOCATION: (615)
88 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
90 <220> FEATURE:
91 <221> NAME/KEY: misc_feature
92 <222> LOCATION: (636)
93 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
95 <220> FEATURE:
96 <221> NAME/KEY: misc_feature
97 <222> LOCATION: (640)
98 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
100 <220> FEATURE:
101 <221> NAME/KEY: misc_feature
102 <222> LOCATION: (646)
103 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
105 <220> FEATURE:
106 <221> NAME/KEY: misc_feature
107 <222> LOCATION: (697)
108 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
110 <220> FEATURE:
111 <221> NAME/KEY: misc_feature
112 <222> LOCATION: (926)
113 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
115 <400> SEQUENCE: 1
116 agggagaggc agtgaccatg aaggctgtgc tgcttgccct gttgatggca ggcttgggccc 60
117 tgcagccagg cactgccctg ctgtgctact cctgcaaagc ccaggtgagc aacgaggact 120
118 gctgcagggt ggagaactgc acccagctgg gggagcagtg ctggaccgcg cgcacccgcg 180
119 cagttggcct cctgaccgtc atcagcaaag gctgcagctt gaactgcgtg gatgactcac 240
120 aggactacta cgtgggcaag aagaacatca cgtgctgtga caccgacttg tgcaacgcca 300
121 gcgggggcca tgccctgcag ccggtgcgag ccataccttg gctgctccct gcaactcgcc 360
122 tgctgctctg gggaccgggc cagctatagg ctctgggggg ccccgctgca gccacactg 420
123 ggtgtggtgc cccaggcctt tgtgccactc ctacagaaac ctggcccgag gggagcctgt 480
124 cctgggttct gaggcacatc ctaacgcaag tttgaccatg tatgtttgca ccccttttcc 540

```

RAW SEQUENCE LISTING

DATE: 05/16/2002

PATENT APPLICATION: US/09/855,632A

TIME: 17:00:09

Input Set : A:\Reiterd4.app

Output Set: N:\CRF3\05162002\I855632A.raw

```

W--> 125 ccnaaccctg accttcccat gggccttttc caggatccn accnggcaga tcagtttttag 600
W--> 126 tganacanat ccgcntgcag atggccctc caaccntttn tgttgntggt tccatggccc 660
W--> 127 agcattttcc acccttaacc ctgtgttcag gcacttnttc ccccaggaag ccttccctgc 720
128 ccacccatt tatgaattga gccagggttg gtccgtggtg tccccgcac ccagcagggg 780
129 acaggcaatc aggagggccc agtaaaggct gagatgaagt ggactgagta gaactggagg 840
130 acaagagttg acgtgagttc ctgggagttt ccagagatgg ggcctggagg cctggaggaa 900
W--> 131 ggggccaggc ctcacatttg tgggntccc gaatggcagc ctgagcacag cgtaggccct 960
132 taataaacac ctgttgata agccaaaaa aaaaaaa 998
134 <210> SEQ ID NO: 2
135 <211> LENGTH: 123
136 <212> TYPE: PRT
137 <213> ORGANISM: Homo sapiens
139 <220> FEATURE:
140 <221> NAME/KEY: PEPTIDE
141 <222> LOCATION: (50)..(64)
143 <220> FEATURE:
144 <221> NAME/KEY: PEPTIDE
145 <222> LOCATION: (71)..(82)
147 <220> FEATURE:
148 <221> NAME/KEY: PEPTIDE
149 <222> LOCATION: (67)..(81)
151 <400> SEQUENCE: 2
152 Met Lys Ala Val Leu Leu Ala Leu Leu Met Ala Gly Leu Ala Leu Gln
153 1 5 10 15
155 Pro Gly Thr Ala Leu Leu Cys Tyr Ser Cys Lys Ala Gln Val Ser Asn
156 20 25 30
158 Glu Asp Cys Leu Gln Val Glu Asn Cys Thr Gln Leu Gly Glu Gln Cys
159 35 40 45
161 Trp Thr Ala Arg Ile Arg Ala Val Gly Leu Leu Thr Val Ile Ser Lys
162 50 55 60
164 Gly Cys Ser Leu Asn Cys Val Asp Asp Ser Gln Asp Tyr Tyr Val Gly
165 65 70 75 80
167 Lys Lys Asn Ile Thr Cys Cys Asp Thr Asp Leu Cys Asn Ala Ser Gly
168 85 90 95
170 Ala His Ala Leu Gln Pro Ala Ala Ala Ile Leu Ala Leu Leu Pro Ala
171 100 105 110
173 Leu Gly Leu Leu Trp Gly Pro Gly Gln Leu
174 115 120
177 <210> SEQ ID NO: 3
178 <211> LENGTH: 441
179 <212> TYPE: DNA
180 <213> ORGANISM: Mus musculus
182 <400> SEQUENCE: 3
183 atgaagacag ttttttttat cctgctggcc acctacttag ccctgcatcc aggtgctgct 60
184 ctgcagtgtc attcatgcac agcacagatg aacaacagag actgtctgaa tgtacagaac 120
185 tgcagcctgg accagcacag ttgctttaca tcgcgcatcc gggccattgg actcgtgaca 180
186 gttatcagta agggctgcag ctcacagtgt gaggatgact cggagaacta ctatttgggc 240
187 aagaagaaca tcacgtgctg ctactctgac ctgtgcaatg tcaacggggc ccacaccctg 300
188 aagccacca ccaccctggg gctgctgacc gtgctctgca gcctgttgct gtggggctcc 360

```

RAW SEQUENCE LISTING

DATE: 05/16/2002

PATENT APPLICATION: US/09/855,632A

TIME: 17:00:09

Input Set : A:\Reiterd4.app

Output Set: N:\CRF3\05162002\I855632A.raw

```

189 agccgtctgt aggctctggg agagcctacc atagcccgat tgtgaaggga tgagctgcac 420
190 tccaccccccac cccacacag g 441
192 <210> SEQ ID NO: 4
193 <211> LENGTH: 123
194 <212> TYPE: PRT
195 <213> ORGANISM: Mus musculus
197 <400> SEQUENCE: 4
198 Met Lys Thr Val Phe Phe Ile Leu Leu Ala Thr Tyr Leu Ala Leu His
199 1 5 10 15
201 Pro Gly Ala Ala Leu Gln Cys Tyr Ser Cys Thr Ala Gln Met Asn Asn
202 20 25 30
204 Arg Asp Cys Leu Asn Val Gln Asn Cys Ser Leu Asp Gln His Ser Cys
205 35 40 45
207 Phe Thr Ser Arg Ile Arg Ala Ile Gly Leu Val Thr Val Ile Ser Lys
208 50 55 60
210 Gly Cys Ser Ser Gln Cys Glu Asp Asp Ser Glu Asn Tyr Tyr Leu Gly
211 65 70 75 80
213 Lys Lys Asn Ile Thr Cys Cys Tyr Ser Asp Leu Cys Asn Val Asn Gly
214 85 90 95
216 Ala His Thr Leu Lys Pro Pro Thr Thr Leu Gly Leu Leu Thr Val Leu
217 100 105 110
219 Cys Ser Leu Leu Trp Gly Ser Ser Arg Leu
220 115 120
223 <210> SEQ ID NO: 5
224 <211> LENGTH: 131
225 <212> TYPE: PRT
226 <213> ORGANISM: Homo sapiens
228 <400> SEQUENCE: 5
229 Met Lys Ile Phe Leu Pro Val Leu Leu Ala Ala Leu Leu Gly Val Glu
230 1 5 10 15
232 Arg Ala Ser Ser Leu Met Cys Phe Ser Cys Leu Asn Gln Lys Ser Asn
233 20 25 30
235 Leu Tyr Cys Leu Lys Pro Thr Ile Cys Ser Asp Gln Asp Asn Tyr Cys
236 35 40 45
238 Val Thr Val Ser Ala Ser Ala Gly Ile Gly Asn Leu Val Thr Phe Gly
239 50 55 60
241 His Ser Leu Ser Lys Thr Cys Ser Pro Ala Cys Pro Ile Pro Glu Gly
242 65 70 75 80
244 Val Asn Val Gly Val Ala Ser Met Gly Ile Ser Cys Cys Gln Ser Phe
245 85 90 95
247 Leu Cys Asn Phe Ser Ala Ala Asp Gly Gly Leu Arg Ala Ser Val Thr
248 100 105 110
250 Leu Leu Gly Ala Gly Leu Leu Leu Ser Leu Leu Pro Ala Leu Leu Arg
251 115 120 125
253 Phe Gly Pro
254 130
257 <210> SEQ ID NO: 6
258 <211> LENGTH: 123
259 <212> TYPE: PRT

```

RAW SEQUENCE LISTING

DATE: 05/16/2002

PATENT APPLICATION: US/09/855,632A

TIME: 17:00:09

Input Set : A:\Reiterd4.app

Output Set: N:\CRF3\05162002\I855632A.raw

```

260 <213> ORGANISM: Homo sapiens
262 <400> SEQUENCE: 6
263 Met Lys Ala Val Leu Leu Ala Leu Leu Met Ala Gly Leu Ala Leu Gln
264   1           5           10           15
266 Pro Gly Thr Ala Leu Leu Cys Tyr Ser Cys Lys Ala Gln Val Ser Asn
267           20           25           30
269 Glu Asp Cys Leu Gln Val Glu Asn Cys Thr Gln Leu Gly Glu Gln Cys
270           35           40           45
272 Trp Thr Ala Arg Ile Arg Ala Val Gly Leu Leu Thr Val Ile Ser Lys
273           50           55           60
275 Gly Cys Ser Leu Asn Cys Val Asp Asp Ser Gln Asp Tyr Tyr Val Gly
276           65           70           75           80
278 Lys Lys Asn Ile Thr Cys Cys Asp Thr Asp Leu Cys Asn Ala Ser Gly
279           85           90           95
281 Ala His Ala Leu Gln Pro Ala Ala Ala Ile Leu Ala Leu Leu Pro Ala
282           100          105          110
284 Leu Gly Leu Leu Leu Trp Gly Pro Gly Gln Leu
285           115          120
288 <210> SEQ ID NO: 7
289 <211> LENGTH: 123
290 <212> TYPE: PRT
291 <213> ORGANISM: Mus musculus
293 <400> SEQUENCE: 7
294 Met Lys Thr Val Leu Phe Leu Leu Leu Ala Thr Tyr Leu Ala Leu His
295   1           5           10           15
297 Pro Gly Ala Ala Leu Gln Cys Tyr Ser Cys Thr Ala Gln Met Asn Asn
298           20           25           30
300 Arg Asp Cys Leu Asn Val Gln Asn Cys Ser Leu Asp Gln His Ser Cys
301           35           40           45
303 Phe Thr Ser Arg Ile Arg Ala Ile Gly Leu Val Thr Val Ile Ser Lys
304           50           55           60
306 Gly Cys Ser Ser Gln Cys Glu Asp Asp Ser Glu Asn Tyr Tyr Leu Gly
307           65           70           75           80
309 Lys Lys Asn Ile Thr Cys Cys Tyr Ser Asp Leu Cys Asn Val Asn Gly
310           85           90           95
312 Ala His Thr Leu Lys Pro Pro Thr Thr Leu Gly Leu Leu Thr Val Leu
313           100          105          110
315 Cys Ser Leu Leu Leu Trp Gly Ser Ser Arg Leu
316           115          120
319 <210> SEQ ID NO: 8
320 <211> LENGTH: 20
321 <212> TYPE: DNA
322 <213> ORGANISM: Artificial Sequence
324 <220> FEATURE:
325 <223> OTHER INFORMATION: Description of Artificial Sequence: RT-PCR PRIMER
327 <400> SEQUENCE: 8
328 ttctcctgct ggccacctac
330 <210> SEQ ID NO: 9
331 <211> LENGTH: 20

```

20

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 05/16/2002
PATENT APPLICATION: US/09/855,632A TIME: 17:00:10

Input Set : A:\Reiterd4.app
Output Set: N:\CRF3\05162002\I855632A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 543,580,584,604,608,615,636,640,646,697,926

VERIFICATION SUMMARY

DATE: 05/16/2002

PATENT APPLICATION: US/09/855,632A

TIME: 17:00:10

Input Set : A:\Reiterd4.app

Output Set: N:\CRF3\05162002\I855632A.raw

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:125 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:540
L:126 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:600
L:127 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:660
L:131 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:900